Claims

We claim:

1. A method to decrease resonance in a printed circuit board (PCB), comprising:

cutting a ground plane to increase a signal transit time in said ground plane.

2. A method in accordance with claim 1, wherein:

cutting said ground plane is performed by orienting a cut axis substantially perpendicular to a long axis of the PCB.

3. A method in accordance with claim 1, wherein:

cutting said ground plane is performed with a continuous cut pattern.

4. A method in accordance with claim 1, wherein:

cutting said ground plane is performed with a zipper cut pattern.

5. A method in accordance with claim 1, wherein:

cutting said ground plane is terminated more than 10 mils from an associated signal trace line.

6. A method to decrease resonance in a PCB, comprising:

lengthening a signal trace line to increase a signal transit time in said signal trace line; and

cutting a ground plane associated with said signal trace line to increase a signal transit time in said ground plane.

7. A method in accordance with claim 6, wherein:

cutting said ground plane is performed by orienting a cut axis substantially perpendicular to a long axis of the PCB.

8. A method in accordance with claim 6, wherein:

cutting said ground plain is performed with a continuous cut pattern.

9. A method in accordance with claim 6, wherein:

cutting said ground plane is performed with a zipper cut pattern.

10. A method in accordance with claim 6, wherein:

cutting said ground plane is terminated more than 10 mils from said associated signal trace line.

11. A method in accordance with claim 6, further comprising:

repeating the lengthening of said signal trace line and the cutting of said ground plane for a plurality of signal trace lines and associated ground planes.

12. A method in accordance with claim 11, further comprising:

coordinating the lengthening and cutting of said plurality of pairs of associated signal trace lines and ground planes so that said plurality of ground planes cuts are similarly located within a PCB layer.

13. An apparatus to decrease resonance in a printed circuit board, comprising:

a signal trace line for carrying a signal;

a ground plane for connecting said signal trace line to a ground;

a cut in said ground plane for increasing the transit time of said signal through said ground plane.

14. An apparatus in accordance with claim 13, further comprising:

an additional length segment within said signal trace line for increasing the transit time of said signal through said signal trace line;

said additional length segment when added to said signal trace line increases the transit time at said signal through said signal trace line out of a resonance range.

15. An apparatus in accordance with claim 13, wherein:

said cut is oriented substantially perpendicular to a long axis of the PCB.

16. A claim in accordance with claim 13, wherein:

said cut is continuous.

17. A claim in accordance with claim 13 wherein:

said cut is a zipper cut.

18. A claim in accordance with claim 13, wherein:

said cut terminates more than 10 mils from said signal trace line.

19. An apparatus in accordance with claim 13, wherein:

a plurality of said cuts are similarly located with a PCB layer.